



ASTO Pool Strategies

April 2015

IMPORTANT

The Maximum Exposure and Target Exposure are not dictated by Arizona State Law or Investment Policy, but are determined entirely by the Portfolio Manager and reviewed by the Investment Risk Management Committee each quarter.

STRATEGY PROFILE - POOL 2
APRIL 2015

Market Value	12/31/14 940,848,319	03/31/15 976,841,512	Change 35,993,193
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Customers: State Agencies & State Operating Fund
Credit: Full Faith and Credit of the United States (FFC)
Assets: Any fixed income security backed by or guaranteed by the U.S. Government.
Maturity: 5 years (final or avg. life for Asset Backed Securities (ABS)/Mortgage Backed Securities MBS)
Duration: 1.18 years
Yield: .58%

Assets:

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	10-60%	28%	24%
US TREAS	100%	10-60%	35%	35%
US AGNY* (FFC ONLY)	100%	10-60%	5%	5%
MTG	40%	10-40%	28%	31%
MUNI	0%	0%	0%	0%
YANKEE	0%	0%	0%	0%
CORP	0%	0%	0%	0%
ABS*(FFC ONLY)	40%	10-40%	5%	5%
CMBS	0%	0%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool can only invest in FFC of the U.S. Government and therefore has no credit concerns.

Liquidity Requirements:

The largest depositor by far in this pool is Arizona Department of Transportation (ADOT.) ADOT deposits and withdrawals, although quite large are cyclical in nature. The pool keeps enough liquidity available for any possible emergency withdrawals that ADOT (or any other state agency) may need to make.

Interest Rate Risk/Duration:

The maximum duration is two years with target duration of one year.

Current Strategy:

Pool 2 has a large allocation to Operating Fund (16%), and ADOT (82%). Based on the April 9 JLBC Revenue and Budget Update the 2015 ending balance of general fund will be \$12 Million (including the enacted transfer from the rainy day fund of \$70 Million). The forecast for the ending balance of 2016 ranges from \$33 Million to negative \$260 Million. Because of the JLBC estimates pools 2, 3, and 4 must be kept very liquid. Investing will continue to be highly liquid securities in combination with very short maturities.

STRATEGY PROFILE - POOL 3
APRIL 2015

Market Value	03/31/15 1,260,146,471	12/31/14 1,200,201,938	Change 59,944,533
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Customers: State Agencies & State General Fund
Credit: Investment Grade
Assets: Commercial Paper, Treasuries, Agencies, Repo, Corp, Muni, MBS, ABS, MMKT
Maturity: 5 years (final or avg life for ABS/MBS)
Duration: 1.06 years
Yield: .69%

Assets:

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	30-60%	31%	34%
US TREAS	100%	0-30%	5%	6%
US AGNY	100%	0-30%	8%	10%
MTG	30%	10-30%	15%	15%
MUNI	30%	0-10%	<1%	<1%
YANKEE	30%	10-30%	2%	2%
CORP	40%	10-30%	20%	21%
ABS	30%	10-30%	19%	11%
CMBS	30%	0-20%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in “investment grade” securities, however the pool will be invested in single A or better credits, and AAA structured product. Unless the triple B security based on the PM’s research is deemed to be upgraded in the near future, or is a short maturity.

Liquidity Requirements:

This pool provides the primary liquidity for the operations of the State. Cyclical distributions are calculated and accounted for to leave enough liquidity to pay distributions. This process is monitored daily by both the cash manager, and the portfolio manager.

Interest Rate Risk/Duration:

The maximum duration is two years with target duration of less than a year.

Current Strategy:

Pool 3 has a large allocation to the Operating Fund (32%), based on the April 9 JLBC Revenue and Budget Update the 2015 ending balance will be \$12 Million (including the enacted transfer from the rainy day fund of \$70 Million). The forecast for the ending balance of 2016 ranges from \$33 Million to negative \$260 Million. Because of the JLBC estimates pools 2, 3, and 4 must be kept very liquid. Investing will continue to be highly liquid securities in combination with very short maturities.

**STRATEGY PROFILE - POOL 4
APRIL 2015**

Market Value	12/31/14 859,693,617	03/31/15 1,006,468,055	Change 86,829,905
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Customers: State Agencies & State General Fund
Credit: United States Agencies
Assets: Any fixed income security issued by, backed by, or guaranteed by the United States of America or any of its' Agencies.
Maturity: 5 years (final or avg life for ABS/MBS)
Duration: 1.13 years
Yield: .64%

Assets:

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	30-60%	42%	31%
US TREAS	100%	0-30%	5%	6%
US AGNY	100%	30-60%	37%	43%
MTG	50%	10-30%	15%	20%
MUNI	0%	0%	0%	0%
YANKEE	0%	0%	0%	0%
CORP	0%	0%	0%	0%
ABS	0%	0%	0%	0%
CMBS	0%	0%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability only invest in those securities issued or guaranteed by the United States and any of its agencies.

Liquidity Requirements:

The largest depositor in this pool is ADOT. ADOT uses this pool primarily for bond proceeds. ADOT deposits and withdrawals, although quite large are cyclical in nature. The pool keeps enough liquidity available for any possible emergency withdrawals that ADOT (or other agency) may need to make.

Interest Rate Risk/Duration:

The maximum duration is two years with target duration of one year.

Current Strategy:

Pool 4 has a large allocation to Operating Fund (27%), and ADOT (61%). Based on the April 9 JLBC Revenue and Budget Update the 2015 ending balance of general fund will be \$12 Million (including the enacted transfer from the rainy day fund of \$70 Million). The forecast for the ending balance of 2016 ranges from \$33 Million to negative \$260 Million. Because of the JLBC estimates pools 2, 3, and 4 must be kept very liquid. Investing will continue to be highly liquid securities in combination with very short maturities.

STRATEGY PROFILE - POOL 10 (INTERNAL)
April 2015

	03/31/15	12/31/14	Change
Market Value	1,078,300,916	1,072,315,657	5,985,259

Customers: State of Arizona
Credit: Investment Grade or better (35-313)
Assets: Commercial Paper, Treasuries, Agencies, Repo, Corp, Muni, MBS, ABS, MMKT
Maturity: 5 years (final or avg. life for ABS/MBS)
Duration: 1.70 years
Yield: .88% **MAX 3.99 FOR ANY ONE SECURITY** unless those assets are non AMT Tax Exempt.

Asset Type Strategy

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	20-70%	23%	23%
US TREAS	100%	10-30%	10%	11%
US AGNY	100%	10-30%	11%	8%
MTG	30%	10-30%	13%	13%
MUNI	30%	0-5%	<1%	<1%
YANKEE	30%	0-20%	2%	2%
CORP	40%	10-30%	26%	27%
ABS	30%	10-30%	16%	17%
CMBS	30%	0-20%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

Investment Grade.

Liquidity Requirements:

Set on a schedule from ADOA, but modified because of JLBC prediction of cash short falls in 2015, 16, 17 and 18.

Interest Rate Risk/Duration:

Keep fund short and liquid enough to change with funding requirements.

Current Strategy:

Pool 10 was established by the Department of Administration and the Governor's Office as a modified approach for federal tax compliance. Pool 10 consists of gross proceeds of the 2010 debt issued by the state. The fund is managed in accordance with IRS Code Section 148. Originally the fund was set up to follow a schedule provided by ADOA, however, Based on projections of cash shortfalls from JLBC the fund is now making the turn to liquidity. JLBC General Fund predictions will be watched closely for the possibility of liquidation of pool 10. April 2015 Budget Update from JLBC projects the balance of the general fund to be \$12MM at the end of FY15, including \$113MM from rainy day fund. Which means pool 10 balance would be \$424MM. With a current Operating Fund balance of \$2,460MM Plus Rainy day of \$456, I don't anticipate we will be close to those numbers by June, however we will remain liquid in the event pool 10 funds will be needed.

STRATEGY PROFILE - POOL 12
APRIL 2015

Market Value	03/31/15 305,790,154	12/31/14 313,236,374	Change -7,446,220
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Customers: Central Arizona Water Conservation District (CAWCD)
Credit: Investment Grade Fixed Income (IG) Single A or better
Asset: UST, GSE, MTG, Corp Debt Single A or better, RMBS, CMBS, ABS, Muni, EFT, MMKT, CP, ABCP, Repo, Fixed Income Mutual Funds, VRDN, CD, YCD.
Duration: 1.53 years (4.5 years target by policy)
Yield: 1.36%

Asset Type Actual:

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	1-20%	20%	19%
US TREAS	100%	1-20%	3%	3%
US AGNY	100%	1-20%	5%	5%
MTG	45%	10-40%	24%	24%
MUNI	30%	0-10%	0%	0%
YANKEE	30%	0-10%	1%	1%
CORP	45%	10-40%	37%	37%
ABS	30%	10-30%	10%	11%
CMBS	30%	0-10%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in single A or better credits, and AAA structured product. The CAWCD board is considering allowing BBB to have the ability to invest in a larger number of corporate issues.

Liquidity Requirements:

CAWCD would like to have \$20MM liquid inside one year for emergency needs.

Interest Rate Risk/Duration:

Target duration by Investment Policy is 4.5 years; however CAWCD would also like to keep 20% of the fund shorter than one year.

Current Strategy:

.CAWCD likes to have this fund managed with \$20MM liquid for emergency needs and 20% of the portfolio maturing inside one year. At the end of March pool 12 had 20% (\$61MM) cash equivalent securities and 50% maturing within one year. The conservative approach was adopted due to the potential of rising interest rates in 2015. We continue to anticipate the FOMC to make the first rate hike later this year, and pool 12 will be well positioned when they do.

STRATEGY PROFILE- Pool 16

APRIL 2015

	12/31/14	03/31/15	Change
Market Value	338,529,007	342,204,566	3,675,559

Credit: Investment Grade Fixed Income (IG) Single A or better
 Asset: UST, GSE, MTG, Corp Debt Single A or better, RMBS, CMBS, ABS, Muni, EFT, MMKT, CP, ABCP, Repo, Fixed Income Mutual Funds, VRDN, CD, YCD.
 Duration: 2.62 year – 3.5 year target, 5 year maximum.
 Yield: 1.75%

Assets:

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	1-20%	4%	3%
US TREAS	100%	1-20%	1%	1%
US AGNY	100%	1-20%	8%	9%
MTG	45%	10-40%	32%	33%
MUNI	30%	0-10%	0%	0%
YANKEE	30%	0-10%	3%	3%
CORP	45%	10-40%	43%	40%
ABS	30%	10-30%	9%	10%
CMBS	30%	0-10%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in single A or better credits, and AAA structured product.

Liquidity Requirements:

This fund will not be managed as a liquidity fund and would be subject to potential loss if liquidated suddenly.

Interest Rate Risk/Duration:

The target duration is between 3 to 4 years with a maximum duration 5 years. The initial goal is to target a return of 3 to 4 million dollars per fiscal year to cover the cost of the FTF budget. (\$4MM on \$340MM is 1.18%)

Current Strategy:

The current annual return to ECHD is right around \$6MM. The fund needs to be managed to keep the annual return above \$4MM while still preparing for higher interest rates. I will continue to run the fund 1y short of duration, as long as the fund continues to earn more than the \$4MM required. Should the yield go down I will extend the duration to add yield.

Dennis Stevenson
Portfolio Manager

STRATEGY PROFILE - POOL 5
APRIL 2015

Market Value	12/31/14 1,255,260,173	03/31/2015 1,076,846,910	Change -178,413,263
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Customers: State, cities, towns, counties, political subdivisions, & state general fund
Credit: Investment Grade
Assets: Commercial Paper, Treasuries, Agencies, Repo, Corporate, ABS
Maturity: Fixed rate 18 month maximum, floating rate 24 month maximum
WAL: .11 years
Yield: .14%

Asset Type Strategy

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	70-90%	81%	81%
US TREAS	100%	0-30%	0%	0%
US AGNY	100%	0-30%	4%	3%
MTG	30%	0-5%	0%	0%
MUNI	30%	0-10%	0%	0%
YANKEE	30%	0-10%	0%	1%
CORP	40%	0-20%	6%	7%
ABS	30%	0-20%	9%	9%
CMBS	10%	0%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in “investment grade” securities (BBB- or better) (A1/P2 short term rating). Policy allows up to 5% in any single issuer.

Liquidity Requirements:

This pool is required to keep sufficient liquidity to meet daily participant withdraw requests.

Interest Rate Risk/Duration:

Manage the pool to be exposed to *minimal* interest rate risk by keeping a WAM of less than 90 days.

Current Strategy:

With interest rates at historic lows pool 5 will be invested with the strategy of reaching out slightly for yield when opportunities arise, but keep liquidity available to go up when interest rates rise in the second part of 2015.

Dennis Stevenson
Portfolio Manager

STRATEGY PROFILE - POOL 7
APRIL 2015

Market Value	12/31/14 990,820,021	03/31/2015 983,644,672	Change 7,175,349
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Customers: State, cities, towns, counties, political subdivisions, & state general fund
Credit: U.S. Treasury or agency/corporate back by full faith & credit of U.S. (FFC)
Assets: Treasuries, Agencies, Repo, Corp (FDIC)
Maturity: Fixed rate 18 month maximum, floating rate 24 month maximum
WAL: .13 years
Yield: .09%

Asset Type Strategy

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	50-100%	87%	97%
US TREAS	100%	10-30%	10%	3%
US AGNY	10%	0-30%	3%	0%
MTG	5%	0-5%	0%	0%
MUNI	5%	0%	0%	0%
YANKEE	0%	0%	0%	0%
CORP	0%	0%	0%	0%
ABS FFC	10%	0-20%	0%	0%
CMBS	0%	0%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

All securities are rated AAA/AA+ and backed by the full faith & credit of the U.S. government.

Liquidity Requirements:

This pool is required to keep sufficient liquidity to meet daily participant withdraw requests.

Interest Rate Risk/Duration:

Manage the pool to be exposed to *minimal* interest rate risk by keeping WAM of less than 90 days.

Current Strategy:

With interest rates at historic lows pool 7 will be invested with the strategy of reaching out slightly for yield when opportunities arise, but keep liquidity available to go up when interest rates rise in the second part of 2015.

Dennis Stevenson
Portfolio Manager

STRATEGY PROFILE - POOL 500
APRIL 2015

Market Value	12/31/14 257,278,538	03/31/15 266,994,419	Change 9,715,881
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Customers: State cities, towns, counties, political subdivisions, & state general fund
Credit: Investment Grade
Assets: Treasuries, Agencies, Corporate, Mortgage Backed (MBS) & Money Market
Maturity: Maximum final maturity (or average life for MBS) of 5 years.
Duration: 1.54 vs 2.87 DVA0 Calculated duration not to exceed .75 years above the benchmark
Yield: 1.18

Asset Type Strategy

Asset Type	Maximum Exposure	Target Exposure	3/31/15	12/31/14
CASH EQ	100%	10-30%	10%	30%
US TREAS	100%	0-10%	2%	2%
US AGNY	100%	0-30%	10%	7%
MTG	30%	10-30%	20%	21%
MUNI	30%	0%	0%	0%
YANKEE	30%	0-10%	1%	1%
CORP	50%	20-50%	45%	36%
ABS	30%	10-30%	12%	2%
CMBS	30%	0-10%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in “investment grade” securities (BBB- or better) however the pool will be invested in single A- or better (A1/P1 short term rating). Policy allows up to 5% in any single issuer.

Liquidity Requirements:

This pool is required to keep sufficient liquidity to meet once a month participant withdraw requests.

Interest Rate Risk/Duration:

The pool is *not* intended to keep a \$1.00 net asset value (NAV) primarily because of the inherent interest rate risk of maintaining a 1+ year average duration.

Current Strategy:

Pool 500 is positioned for an interest rate rise in 2015. This pool will continue to be run short of the benchmark to take advantage of rates as they rise. The use of ABS and MBS will be added throughout the next quarter to add some yield to the portfolio.

Dennis Stevenson
Portfolio Manager

STRATEGY PROFILE - POOL 700
APRIL 2015

Market Value	12/31/14 145,368,891	03/31/15 146,418,250	Change 1,049
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Customers: State cities, towns, counties, political subdivisions, & state general fund
Credit: U.S. Treasury or agency/corporate back by full faith & credit of U.S. (FFC)
Assets: Treasuries, GNMA Mortgage Backed Securities (MBS), Repo, Corporate (FDIC-backed)
Maturity: Maximum final maturity (or average life for MBS) of 5 years
Duration: 1.73 vs 3.03 (75% GVQ0 & 25% MGNM) Calculated duration not to exceed .75 years over the benchmark
Yield: .95%

Asset Type Strategy

Asset Type	Maximum Exposure	Target Exposure	03/31/15	12/31/14
CASH EQ	100%	0-20%	18%	15%
US TREAS	100%	10-30%	19%	20%
US AGNY (FFC ONLY)	100%	20-50%	25%	25%
MTG (FFC ONLY)	50%	20-50%	38%	40%
MUNI	0%	0%	0%	0%
YANKEE (FFC ONLY)	50%	0-20%	0%	0%
CORP	0%	0%	0%	0%
ABS (FFC ONLY)	50%	0-20%	0%	0%
CMBS	0%	0%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

All securities are rated AAA/AA+ and backed by the full faith & credit of the U.S. government.

Liquidity Requirements:

This pool is required to keep sufficient liquidity to meet once a month participant withdraw requests.

Interest Rate Risk/Duration:

The pool is *not* intended to keep a \$1.00 net asset value (NAV) primarily because of the inherent interest rate risk of maintaining a 1+ year average duration.

Current Strategy:

Pool 700 is positioned for an interest rate rise in 2015. This pool will continue to be run short of the benchmark to take advantage of rates as they rise. The use of FFC ABS and MBS will be added throughout the next quarter to add some yield to the portfolio.

Tim White
Senior Portfolio Manager

STRATEGY PROFILE POOL 205
LONG-TERM FIXED INCOME POOL 36.8%
April 2015

Market Value	3/31/15 \$1,896,139,000	12/31/14 \$1,875,441,000	Change \$20,698,000
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Customers: State Trust Land Beneficiaries
Credit: Investment Grade
Assets: U.S. Treasuries, U.S. Agencies, Corp, Muni, MBS/CMO/CMBS, ABS, LGIP, MKT
Maturity: No Restrictions
Duration: Max. Weighted Average Duration of 15 Years (Effective Duration 3.65 Years 3/31/15)
TRR: 0.46% 1 Month; 1.31% 3 month; 2.63% FYTD

Asset Type Strategy

Asset Type	Maximum (MV)	Target (MV)	3/31/15	12/31/14
U.S. Treasury	100%	20-45%	29%	30%
U.S. Agencies	100%	0-25%	6%	6%
Investment Grade Corp. Bonds	40%	10-35%	27%	31%
Agency MBS/CMO/CMBS AAA/Aaa	50%	15-40%	28%	22%
Non-Agency MBS/CMBS AAA/Aaa	25%	0-15%	8%	3%
Cash Equivalents/LGIP	25%	0-20%	1%	8%
Long-Term LGIP	5%	0-5%	0%	0%
ABS AAA/Aaa	5%	0-5%	1%	1%
Non-US GOVT Sovereign	10%	0-10%	0%	0%

Guidelines: (Investment Policy)

Credit Risk:

This pool currently has the ability to invest in “investment grade” securities (BBB- or better) however the pool will be likely take less spread duration than the index with a tendency to favor higher quality rated bonds. Policy allows up to 5% in any single issuer.

Liquidity Requirements:

This pool is required to keep sufficient liquidity to meet once a month distributions to beneficiaries. Based on the Constitutional formula the current monthly distribution is \$6,810,786. This is generally accomplished through mortgage paydowns and maturities. In addition, any state trust land sales where a developer defaults on the loan may be clawed back by the State Land Department.

Interest Rate Risk/Duration:

Maximum weighted average duration is 15 years. The effective duration at 3/31/15 and 12/31/14 was 3.65 and 3.68 years, respectively. Effective duration for Pool 205 decreased by .03 years. Over the same time period, the Citi BIG Index stood at 5.29 and 5.28 respectively, increasing .01 years. Key rate durations are short in the 20 & 30 year UST buckets causing the 1.64 year difference.

Current Strategy:

With rates still near all-time lows, the risk appears to be skewed toward higher rates. Pool 205 is positioned for an interest rate rise in 2015. A shorter duration bias is intentional although I continue to look for sensible ways to increase duration in various buckets. The strategy will be to opportunistically maintain duration possibly making strategic MBS swaps as the street consensus remains bearish with bias toward a bear steepener. Pool 205 should continue to outperform in this scenario.

- Maintain defensive posture against rising interest rates with shorter duration than SBBIG using laddered maturities to allow reinvestment at higher rates as the U.S. economy improves, adding duration strategically on back-ups without extending beyond the SBBIG,

Tim White
Senior Portfolio Manager

- Corporates: Overweight corporate notes/shorten duration to take advantage of improving U.S. economy while swapping some high quality longer duration corp. names into triple-B bucket (small moves), – slowly adding back to high-quality financials over next year while reducing selected industrials and maintain total corporate overweight, down in duration/credit quality trade,
- Add 4-6% additional FRN's to target 10-12% 2-5yr floating rate securities with new cash to keep duration short and defensive versus rate increases,
- Underweight but add to short/intermediate UST duration (2-13yr)/move to neutral AGCY, Overweight ABS by 1-2% (SBBIG has insignificant exposure 0.3%),
- Mortgages: Add to MBS durations/replenishing MBS pay downs; utilize structured CMO's to add mortgage exposure while protecting against mortgage extension risk versus Pass-Through stack; diversify fixed coupon MBS with ARM's (sparingly); overweight 15 and 20 year collateral vs. 30's; overweight non-GNMA MBS/underweight GNMA collateral; swap out of short, high coupon CMO's with fast CPR's into slower paying RMBS/CMBS with better prepayment protection adding to 3-8 year duration, steep part of curve with good roll-down and be mindful of extension risk if adding MBS on the long end of that range.